

(54) ROTARY PULSATION DEVICE

(57) ABSTRACT

This invention belongs to mixing technology and can be used in the chemical, food, pharmaceutical, and other industries for processes of dispersion, homogenization, pasteurization, and sterilization of liquid media and for performing sonochemical reactions in the ultrasound frequency band. The technical objective is to raise the effectiveness of treatment of flowing liquid media. The technical objective is accomplished by the fact that the rotary pulsation device contains a body (1), rotor (2), and stator (4), having turbulizing elements (3, 8) on their opposing surfaces, and moreover, the disk of the rotor (2) has radial incisions and/or slots (9) between the turbulizing elements 3.

The device is equipped with a means (11) of adjusting the clearance between the rotor (2) and the stator (4), and the stator (4) has at least one support point in the central part, located in the area of the rotor's axis of rotation, and is mounted with a clearance to the body, and the incisions and/or slots on the rotor disk may be located along its periphery or along concentric circles. The turbulizing elements of the rotor and stator are trapezoidal in shape. The central part of the stator has through choke channels (6) to pass the medium and may be made in the form of a conical or cylindrical shell, and the peripheral part [may be made] in the form of a disk or frustum of a cone. The device permits the use of one or more stators with various degrees of stiffness.